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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/726,449	12/02/2003	Dimitre Hristov Hristov	2003PI1789US	6754

7590 04/17/2007
Siemens Corporation
Attn: Elsa Keller, Legal Administrator
Intellectual Property Department
170 Wood Avenue South
Iselin, NJ 08830

EXAMINER

LEE, SHUN K

ART UNIT	PAPER NUMBER
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2884

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/17/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/726,449	HRISTOV ET AL.	
	Examiner	Art Unit	
	Shun Lee	2884	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 February 2006 and 10 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-18,20,22,23 and 25-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-18,20,22,23 and 25-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Oath/Declaration

1. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

It does not identify the mailing address of each inventor (*i.e.*, it does not identify the city and state). A mailing address is an address at which an inventor customarily receives his or her mail and may be either a home or business address. The mailing address should include the ZIP Code designation. The mailing address may be provided in an application data sheet or a supplemental oath or declaration. See 37 CFR 1.63(c) and 37 CFR 1.76.

It is noted that applicant has submitted a "SUPPLEMENTAL APPLICATION DATA SHEET" on 10 May 2006. This submission does not comply with 37 CFR 1.76 since a supplemental application data sheet must be titled "Supplemental Application Data Sheet" and include all of the section headings listed in 37 CFR 1.76(b) with all appropriate data for each section heading. The submission also appears to be missing the second inventor (as listed in the 2 December 2003 Declaration and Power of Attorney). There also appears to be an inconsistency between the citizenship listed in the 2 December 2003 Declaration and Power of Attorney (*i.e.*, "Canada") and the 10 May 2006 "SUPPLEMENTAL APPLICATION DATA SHEET" (*i.e.*, "US").

In addition, the 10 May 2006 "SUPPLEMENTAL APPLICATION DATA SHEET" appears to indicate that correspondence information and representative information are being changed. Applicant should note that correspondence changes are governed by 37 CFR 1.33(a). Applicant should also note that a power of attorney was filed on 2 December

2003. Therefore it appears that applicant is attempting to use the 10 May 2006 "SUPPLEMENTAL APPLICATION DATA SHEET" to revoke the power of attorney (see 37 CFR 1.36) and file a new power of attorney to the patent practitioners associated with a Customer Number. An application data sheet cannot be used to revoke a power of attorney and/or grant a new power of attorney. If this is the intent of applicant, it is suggested PTO/SB/82 should be filed for revocation of power of attorney with a new power of attorney and/or change of correspondence address.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 10-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Petrillo (US 5,616,924) in view of Pochwalski (US 4,205,231).

The specification discloses (pg. 4, lines 23-24) that "Optical filter 15 may comprise any element or elements for controlling an amount of light 40 that passes to imaging elements 20".

In regard to claim **10**, **13**, and **15**, Petrillo discloses (Fig. 6) an apparatus comprising:

- (a) a scintillator (22) to emit light;
- (b) imaging elements (30) to capture image information based on received light; and
- (c) first optical filter (54) disposed at a first position between the scintillator (22) and the imaging elements (30), wherein an opacity of the first optical filter (54) is controllable (column 5, lines 5-19).

The apparatus of Petrillo lacks an additional second optical filter disposed at a second position between the scintillator and the imaging elements wherein the first and second optical filters can be moved by a control from the first and third positions, respectively, to a second and fourth positions that is not between the scintillator and the imaging elements. However, Petrillo also discloses (column 5, lines 12-25) that a plurality of scintillation crystals may be used to differentiate radiation energy and that optical filters (e.g., 54 in Figs. 5 and 6) can be provided on the top, bottom, and side edges of the scintillator (e.g., 22 in Figs. 5 and 6). Further, Pochwalski teaches (column 2, lines 3-22) that an adjustable light flux attenuator (e.g., spring 6 controlled by a transmission) may be fully withdrawn, thus reducing the initial light attenuation caused by the light flux attenuator to a practically negligible value. Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to provide a plurality of optical filters which can be moved by a control in the apparatus of Petrillo, in order to obtain

light attenuation that can be adjusted in fine increments from a practically negligible value (*i.e.*, when all the optical filters are not between the scintillator and the imaging elements) to total attenuation (*i.e.*, when all the optical filters are between the scintillator and the imaging elements).

In regard to claim **11** which is dependent on claim 10, Petrillo also discloses (column 5, lines 26-29; Fig. 6) that the imaging elements (30) comprise a plurality of charge-coupled devices.

In regard to claim **12** which is dependent on claim 10, Petrillo also discloses (column 5, lines 26-29; Fig. 6) that the imaging elements (30) comprise a plurality of photodiodes.

In regard to claim **14** which is dependent on claim 13, Petrillo also discloses (column 4, lines 54-64; Figs. 4 and 6) a control (60) to control an opacity of the first optical filter (54).

5. Claims 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Petrillo (US 5,616,924) in view of Pochwalski (US 4,205,231) as applied to claim 10 above, and further in view of Armistead (US 4,852,131).

In regard to claims **16** and **18** which are dependent on claim 10, the apparatus of Petrillo lacks an explicit description of a linear accelerator to emit X-rays which are received by the scintillator and the scintillator to emit light based on the received X-rays. However, Petrillo also discloses (column 1, lines 8-15) that the invention find particular application to computerized tomographic scanners. Since Petrillo does not disclose and/or require a specific computerized tomographic scanner, one having ordinary skill in

the art at the time of the invention would reasonably interpret the unspecified computerized tomographic scanner of Petrillo as any one of the known conventional computerized tomographic scanners that would not require further description. Further, Armistead teaches (column 3, lines 53-64) a computed tomography system includes a conventional radiation source such as a linear accelerator. Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention that the unspecified computerized tomographic scanner in Petrillo is a known conventional computerized tomographic scanner (e.g., comprising a linear accelerator).

In regard to claim 17 which is dependent on claim 16, Petrillo also discloses (Fig. 6) that the first optical filter (54) receive at least a portion of light emitted by the scintillator (22).

6. Claims 20, 22, 23, 25, and 27-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Petrillo (US 5,616,924) in view of Pochwalski (US 4,205,231) and Meccariello *et al.* (US 5,003,572).

In regard to claims 20, 22, 23, 25, and 27-30, Petrillo in view of Pochwalski is applied as in claims 10-15 above. The method of Petrillo lacks a computer-readable medium storing processor-executable process steps to control the amount of light to be received by imaging elements based on a determined dose. Meccariello *et al.* teach (column 12, lines 20-61; Fig. 1) a microcomputer executing the process steps of controlling an amount of light to be received by imaging elements (44) based on a determined dose by controlling the opacity of an optical filter (48) disposed between a scintillator (35) and the imaging elements (44), in order to obtain automatic brightness

control of an X-ray image (column 2, lines 23-42). Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to provide a computer-readable medium storing processor-executable process steps in the apparatus of Petrillo, in order to obtain automatic brightness control of an X-ray image.

7. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Petrillo (US 5,616,924) in view of Pochwalski (US 4,205,231) as applied to claim 10 above, and further in view of Meccariello *et al.* (US 5,003,572).

In regard to claim 26 which is dependent on claim 10, Petrillo in view of Pochwalski is applied as in claim 20 above.

Response to Arguments

8. Applicant's arguments filed 2 February 2006 have been fully considered but they are not persuasive.

Applicant argues (remarks filed 2 February 2006) that the combination of the cited art cannot be seen to disclose or to suggest a first optical filter controllably movable from a first position between a scintillator and imaging elements to a second position not between the scintillator and the imaging elements, and a second optical filter controllably movable from a third position between the scintillator and the imaging elements to a fourth position not between the scintillator and the imaging elements since spring 6 cannot be seen to disclose or to suggest a first optical filter and a second optical filter. Examiner respectfully disagrees. First it is noted that the specification discloses (pg. 4, lines 23-24) that "Optical filter 15 may comprise any element or elements for controlling an amount of light 40 that passes to imaging elements 20 ". Thus within the context of

the specification, the "optical filter" as recited in the claims are any element or elements for controlling an amount of light. Therefore, both the liquid crystal layer (54 in Figs. 5 and 6 of Petrillo) and the spring (6 in the Fig. of Pochwalski) are within the scope of "optical filter" as recited in the claims. Further, Petrillo discloses (column 5, lines 12-25) that a plurality of scintillation crystals may be used to differentiate radiation energy and that optical filters (*e.g.*, 54 in Figs. 5 and 6) can be provided on the top, bottom, and side edges of the scintillator (*e.g.*, 22 in Figs. 5 and 6). Thus Petrillo teach or suggest one or more optical filters for one or more scintillators. In addition, Pochwalski states (column 2, lines 19-22) that "The spring turns may be fully withdrawn from the counting chamber, thus reducing the initial light attenuation caused by the spring to a practically negligible value". Thus Pochwalski teaches that an optical element can be removed from between the scintillator and photomultiplier tubes, in order to reduce the initial light attenuation caused by the optical filter to a practically negligible value. Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to provide a plurality of optical filters which can be moved by a control in the apparatus of Petrillo, in order to obtain light attenuation that can be adjusted in fine increments from a practically negligible value (*i.e.*, when all the optical filters are not between the scintillator and the imaging elements) to total attenuation (*i.e.*, when all the optical filters are between the scintillator and the imaging elements).

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

Art Unit: 2884

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shun Lee whose telephone number is (571) 272-2439. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2884

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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